03040206-09

(Waccamaw River)

General Description

Watershed 03040206-09 (formerly 03040206-120, 140) is located in Horry County and consists primarily of the ***Waccamaw River*** and its tributaries from Simpson Creek to Socastee Creek (AIWW). The watershed occupies 136,317 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. Land use/land cover in the watershed includes: 44.6% forested wetland, 19.0% forested land, 15.5% urban land, 14.8% agricultural land, 2.8% scrub/shrub land, 1.6% water, 1.5% nonforested wetland, and 0.2% barren land.

This portion of the Waccamaw River accepts drainage from its upstream reaches along with Jones Big Swamp (Boggy Swamp, Horse Savannah, Watts Bay), Stanley Creek (Beaverdam Swamp, Big Swamp), Tilly Swamp (Tiger Bay, Cane Bay, Buck Bay, Long Branch), and Round Swamp. Dam Swamp enters the river next followed by Steritt Swamp (East Prong, South Prong). The river then flows past the City of Conway and accepts drainage from Bear Swamp (Butler Swamp, Willow Springs Branch, Busbee Lake), Pitch Lodge Lake, Cox Ferry Lake, and Thorofare Creek. Wadus Lake connects Busbee Lake to the river. Gravely Gully and Halfway Swamp (Big Branch) enter the river next, followed by Old Womans Lake, Big Buckskin Creek, and Peachtree Lake. Socastee Swamp and the AIWW (Folly Swamp) merge near the Town of Socastee to form Socastee Creek and flows into the Waccamaw River. Enterprise Creek connects the Waccamaw River and Socastee Creek just upstream of their confluence. There are a total of 226.2 stream miles and 477.1 acres of lake waters in this watershed. The Waccamaw River is classified FW* (dissolved oxygen not less than 4.0 mg/l and pH between 5.0 and 8.5) and the remaining streams are classified FW.

Surface Water Quality

Station #	Type	Class	Description
RS-02481	RS02	FW	WACCAMAW RIVER AT S-26-31, RED BLUFF LANDING
PD-369	S/INT	FW*	WACCAMAW RIVER AT S-26-105, REEVES FERRY ROAD
MD-088	S/W	FW	AIWW 1 MI S OF BRIDGE ON US 501
MD-089	S/W	FW	AIWW 2 MI S OF BRIDGE ON US 501
RS-03332	RS02	FW	UNNAMED TRIB TO AIWW AT SC 707, 1.2MI ENE OF SOCASTEE
MD-127	P/SPRP	FW	AIWW AT SC 544, 7.5 MI SW OF MYRTLE BEACH
MD-110	S/W	FW*	WACCAMAW RIVER AT US 501 BYPASS AROUND CONWAY
MD-111	S/W	FW*	WACCAMAW RIVER AT COX'S FERRY ON COUNTY ROAD 110
MD-145	SPRP	FW*	WACCAMAW R., 1 MI DS OF BUCKSVILLE LANDING AT BIG BEND IN RIVER
MD-136	S/W	FW*	WACCAMAW RIVER, 0.25 MI UPSTREAM OF JUNCTION WITH AIWW

Waccamaw River – There are six SCDHEC monitoring sites along this section of the Waccamaw River and recreational uses are fully supported at all sites. This is a blackwater system, characterized by naturally low pH and dissolved oxygen conditions. At the furthest upstream site ***(RS-02481)***, aquatic life uses are fully supported. Although pH excursions occurred, they were typical of values seen in swamps and blackwater systems and were considered natural, not standards violations. Further downstream ***(PD-369)***, aquatic life uses are partially supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in

dissolved oxygen concentration. At the next site downstream ***(MD-110)***, aquatic life uses are fully supported. Although dissolved oxygen excursions occurred, they were typical of values seen in swamp and blackwater systems and were considered natural, not standards violations.

Further downstream ***(MD-111)***, aquatic life uses are not supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration suggest improving conditions for these parameters. At the next site downstream ***(MD-145)***, aquatic life uses are partially supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. There is a significant decreasing trend in pH. A significant decreasing trend in turbidity suggests improving conditions for this parameter. At the furthest downstream site ***(MD-136)***, aquatic life uses are not supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter.

Atlantic Intracoastal Waterway (AIWW) - There are three SCDHEC monitoring sites along this section of the AIWW. This section of the AIWW is influenced by tidal pressures from both the Little River and the Winyah Bay ends, so flushing and mixing are limited, causing a bathtub effect whereby the water moves back and forth, but takes a long time to actually move out of the waterway. At the furthest upstream site ***(MD-088)***, aquatic life uses are fully supported; however, there is a significant increasing trend in turbidity. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. At the midstream site ***(MD-089)***, aquatic life and recreational uses are fully supported. Although dissolved oxygen and pH excursions occurred, they were typical of values seen in tidally influenced systems with limited flushing and significant marsh drainage and were considered natural, not standards violations. At the furthest downstream site ***(MD-127)***, aquatic life uses are fully supported; however, there is a significant increasing trend in turbidity. There is a significant increasing trend in pH. Although dissolved oxygen and pH excursions occurred, they were typical of values seen in tidally influenced systems with limited flushing and significant marsh drainage and were considered natural, not standards violations. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria concentration.

Unnamed Tributary to AIWW (RS-03332) - Aquatic life uses are fully supported, but recreational uses are partially supported due to fecal coliform bacteria excursions.

A fish consumption advisory has been issued by the Department for mercury and includes the ***Waccamaw River*** *and the* ***Atlantic Intracoastal Waterway*** *within this watershed (see advisory p.106).*

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-013	GB	BLACK CREEK	CONWAY #6
AMB-088	GB	SURFICIAL SANDS	SOCASTEE

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)*	*NPDES#* *TYPE* *COMMENT*
WACCAMAW RIVER S.C. PUBLIC SERV. AUTH./GRAINGER PIPE #: 001 FLOW: 2.21 PIPE #: 002 FLOW: 122.9	SC0001104 MAJOR INDUSTRIAL
WACCAMAW RIVER GSW&SA/SCHWARTZ PLANT PIPE #: 002 FLOW: 0.7 PIPE #: 003 FLOW: 0.4 PIPE #: 004 FLOW: 0.694	SC0037753 MAJOR DOMESTIC LAND APPLICATION
WACCAMAW RIVER HUCKS LANDSCAPING & CONSTR./HUCKS MINE #2 PIPE #: 001 FLOW: M/R	SCG730307 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY SOUTHERN ASPHALT/CASTLEWOOD PIPE #: 001 FLOW: M/R	SCG730397 MINOR INDUSTRIAL
SOCASTEE CREEK TRIBUTARY CLIFTON BARNHILL MINE PIPE #: 001 FLOW: M/R	SCG730016 MINOR INDUSTRIAL
WADUS LAKE GSW&SA/CONWAY WWTP PIPE #: 001 FLOW: 4.0	SC0021733 MAJOR DOMESTIC
STERITT SWAMP HUCKS LANDSCAPING & CONSTR./HUCKS MINE #8 PIPE #: 001 FLOW: M/R	SCG730347 MINOR INDUSTRIAL
EAST PRONG HUCKS LANDSCAPING & CONSTR./HUCKS MINE #1 PIPE #: 001 FLOW: M/R	SCG730310 MINOR INDUSTRIAL
SOCASTEE SWAMP RE GOODSON CONSTR./CAROLINA FOREST BLVD PIPE #: 001 FLOW: M/R	SCG730292 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY SOUTHERN ASPHALT INC./EAGLE SOUTH PIPE #: 001 FLOW: M/R	SCG730352 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY SOUTHERN ASPHALT INC./CASTLEWOOD SD PIPE #: 001 FLOW: M/R	SCG730397 MINOR INDUSTRIAL

WACCAMAW RIVER TRIBUTARY WEAVER CO./COX FERRY MINE #2 PIPE #: 001 FLOW: M/R	SCG730560 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY WEAVER CO., INC. PIPE #: 001 FLOW: M/R	SCG750020 MINOR INDUSTRIAL
WILLOW SPRINGS BRANCH RICHARDSON & SONS/RICKYS DIRT PIPE #: 001 FLOW: M/R	SCG730113 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY ROBERT O. COLLINS CO., INC./LAKE RIDGE PIPE #: 001 FLOW: M/R	SCG730267 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY ROBERT O. COLLINS CO., INC./SOCASTEE PIT PIPE #: 001 FLOW: M/R	SCG730136 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY ROBERT O. COLLINS CO., INC./FORESTBROOK PIPE #: 001 FLOW: M/R	SCG730236 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY ROBERT O. COLLINS CO., INC./544 MINE PIPE #: 001 FLOW: M/R	SCG730237 MINOR INDUSTRIAL
WACCAMAW RIVER TRIBUTARY CL BENTON & SONS, INC./SEA MIST MINE PIPE #: 001 FLOW: M/R	SCG730057 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME ***FACILITY TYPE***	***PERMIT #*** ***STATUS***
HORRY COUNTY LANDFILL MUNICIPAL	---------- CLOSED
HORRY COUNTY LANDFILL MUNICIPAL	261001-1101 CLOSED
HORRY COUNTY LANDFILL MUNICIPAL	261001-1102, 261001-1201 ACTIVE
CITY OF CONWAY DUMP MUNICIPAL	---------- CLOSED
THOMPKINS C&D DUMP CONSTRUCTION	---------- CLOSED
HORRY COUNTY COMPOSTING FACILITY COMPOSTING	261001-3001 ACTIVE
COASTAL RECLAMATION COMPOSTING SITE COMPOSTING	262448-3001 ACTIVE
AO HARDEE & SONS COMPOSTING	262626-3001 ACTIVE

HAMMOND WOOD RECYCLING #2 COMPOSTING	262660-3001 INACTIVE
ROBERT COLLINS INC. COMPOSTING	262659-3001 INACTIVE
DIXIE RECYCLING LLC COMPOSTING	262652-3001 ACTIVE
C. OWENS & SONS COMPOSTING	262635-3001 ACTIVE
HOLMES COMPOSTING SITE COMPOSTING	262616-3001 ACTIVE
POSTEC RECYCLING INC. COMPOSTING	262476-3001 INACTIVE

Mining Activities

MINING COMPANY ***MINE NAME***	***PERMIT #*** ***MINERAL***
ASHLEY ANDERSON FARM GULLEY BRANCH MINE	1475-51 SAND/CLAY; TOPSOIL
ASHLEY ANDERSON FARM ANDERSON MINE	1149-51 SAND; SAND/CLAY
ASHLEY ANDERSON FARM TILLEY SWAMP MINING	1030-51 SAND
ANTHONY INMAN INMAN POND	1480-51 SAND
HUCKS LANDSCAPING HUCKS MINE	1282-51 SAND/CLAY
TW HUNT CONSTRUCTION CO. ALL SAINTS MINE	1673-51 SAND/CLAY
WEAVER COMPANY, INC. COX FERRY MINE #2	1405-51 SAND
ROBERT O. COLLINS CO., INC. FORESTBROOK MINE	1198-51 SAND; SAND/CLAY
RE GOODSON CONSTRUCTION CO. GOODSON/CAROLINA FOREST BLVD.	1363-51 SAND
ARCHIE BELL CONSTRUCTION, INC. LEES LANDING CIRCLE MINE	1056-51 SAND/CLAY
HOME PLACE FARMS LLC LAKE RIDGE MINE	1158-51 SAND; SAND/CLAY
ABC CORP. OF S.C. PIT #2	0784-51 SAND/CLAY
ROBERT O. COLLINS CO., INC. 544 MINE	1197-51 SAND; SAND/CLAY

ROBERT O. COLLINS CO., INC. SOCASTEE PIT	1083-51 SAND
C. OWENS & SONS, INC. OWENS PIT	0951-51 SAND/CLAY
FLORENCE D. BARNHILL FLORENCE BARNHILL MINE	1015-51 SAND/CLAY
DONALD RICHARDSON & SON, INC. RICKYS DIRT PIT	1099-51 SAND/CLAY
CL BENTON & SONS, INC. SEA MIST	1107-51 SAND
STALVEYS CONSTRUCTION INC. CHARLES LEWIS MINE	1745-51 SAND

Water Quantity

Portions of this watershed fall within the Waccamaw Capacity Use Area and large groundwater uses must be reported (see Capacity Use Program p.27).

Growth Potential

There is a high potential for residential, commercial, and industrial growth in this watershed, which contains the City of Conway and the outskirts of the Cities of Myrtle Beach and North Myrtle Beach. A high increase of growth is expected east of the Waccamaw River in particular, and a moderate increase west of the river. All but the northern most corner of the watershed contains water infrastructure. Sewer infrastructure is located in much of the watershed, including the S.C. Hwy. 544 corridor, east of S.C. Hwy. 544 (excluding the area north of U.S. Hwy. 501), and in the Bucksport community. Commercial and residential development is the predominate land use in the City of Conway and along sections of U.S. Hwy. 501, U.S. Hwy. 17 Bypass, and S.C. Hwy. 544. Two industrial parks are located along the U.S. Hwy. 501 corridor as well as an existing rail line. A section of the former Myrtle Beach Air Force Base is located in the watershed and is being developed for industrial and commercial use. Most of the land use outside of these areas consist of residential development and timberland. U.S. Hwy 544 has now been widened and U.S. Hwy. 17 is proposed to be widened. Portions of the Buist Tract, the largest undeveloped tract of land in Horry County, are being developed. The proposed Preferred Alternative route of I-73 (Southern Corridor) would cross this watershed and could bring some growth to the area, especially around interchanges.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A total maximum daily load (TMDL) for oxygen demanding substances has been developed for the main stem of the **Waccamaw River** and the **Atlantic Intracoastal Waterway (AIWW)** in watersheds 02040206-09, 03040206-10, and 03040208-03. The TMDL addresses 12 separate monitoring stations on the State's 1998 303(d) list of impaired waters. The TMDL, based on a maximum 0.1 mg/l deficit allowed in waters that do not meet applicable dissolved

oxygen standards due to natural conditions, will result in a decrease of approximately 63% in the permitted oxygen demanding load discharged to the system. The decreased loadings are being implemented through the NPDES permitting system with new, more restrictive limits becoming final at the conclusion of appropriate compliance schedules.

Special Projects

Development & Implementation of a S.C. Coast-A-Syst

The S.C. Coast-A-Syst project targets homeowners living along the Atlantic Intracoastal Waterway (AIWW) and Socastee Creek (watershed 03040206-09) and the AIWW and Little River (watershed 03040208-03). Like much of the coast, these areas are experiencing rapid development and increased populations, while also harboring fragile water resources for recreation and marine ecology. High fecal coliform bacteria counts, water quality non-supportive of aquatic life because of low dissolved oxygen, and pH excursions exist in local waterbodies.

S.C. Sea Grant Consortium and Clemson University developed a program called South Carolina Coast-A-Syst. This product, modeled after the Home*A*Syst and Farm-A-Syst programs, is used to teach watershed residents and waterbody users responsible practices for protecting water quality, with the ultimate goal to reduce bacteria and nutrient input into nearby waterbodies from urban/suburban activities and land development. Research was conducted through surveys to determine what BMPs were appropriate for coastal South Carolina, where education about nonpoint source was lacking, and how best to reach homeowners in providing continued education. Education of coastal residents included identification of practices, which detrimentally affect water quality, reasons why those practices do so, and instructions in better water quality management practices.

Sea Grant Extension and Clemson Extension published a S.C. Coast-A-Syst packet, which includes self-assessments and fact sheets on homeowner practices. Sea Grant Extension trained Extension agents, Master Gardeners, and homeowner associations to administer this homestead self-assessment program, distribute the program and materials through homeowner associations and other public groups, provide support for the program through the Horry County Extension Service, and provide electronic distribution of the program via the world wide web.